

CHAMBERS'S JOURNAL

OF

POPULAR

LITERATURE, SCIENCE, AND ART

Fifth Series

ESTABLISHED BY WILLIAM AND ROBERT CHAMBERS, 1832

No. 573.—VOL. XI.

SATURDAY, DECEMBER 22, 1894.

PRICE 1½d.

A CHINESE MENU.

JOHN CHINAMAN in everything appertaining to eating and drinking is a person of peculiar tastes and a born epicure. The delicacy of his palate and his love for the good things of this world must not be judged by the mechanical rice-swallowing of a poor coolie, any more than the culinary capabilities of a good English cook can be gauged by the contents of a fried-fish shop. Even the coolies shovelling down their throats bowl after bowl of boiled rice show the rudiments at least of a palate as they take a dip, after every twenty mouthfuls, into the little bowl of curry and chillies which stands as the common property of the company. If, too, you stand near and listen to their conversation—provided, of course, you understand it—you will find it chiefly consists of a heated discussion regarding the quality of the rice on the different estates and the flavour peculiar to each crop. And who shall say that a man who can detect a variety of flavours in boiled rice is not gifted with a delicate taste?

Except on the occasion of the marriage of one of his children, or a birthday, it is unusual for a Chinese gentleman to give a dinner party at his own house. It is done by the middle classes; but in 'Society,' the usual method is to give it at an hotel or on one of the 'flower-boats.' Unlike their neighbours the Japanese, they do not squat on the floor during meals, but understand the use and comfort of chairs. Most of the dishes of which the dinner consists are placed beforehand on the table, which is therefore necessarily a large one, and is not graced with a cloth. The meal generally commences with a drink all round, followed by a sort of *hors-d'œuvre*, consisting not of dainty appetising morsels, but of fruit and nuts; then comes soup; followed by various stews and messes, as to the constituents of which more anon. It is particularly noticeable that all the dishes are of a decidedly oily flavour, and indeed this appears indispensable to the Chinese

cook, who, by the way, never serves his meat roasted as we know it, but cut up into small pieces, and stewed or broiled. Between each course, it is a common practice to smoke a few whiffs of tobacco from a pipe, to while away the interval. Like Europeans, the Chinese place especial stress upon the ceremony of taking wine with one another; and it is considered as a particular compliment to your neighbour, should you condescend to take up a morsel with your chop-sticks and place it in his mouth. At the end of the meal, one of the waiters goes round with a forbidding-looking napkin, which he dips into a bowl of water and hands to each person in turn, to wipe his mouth and hands with; and, as may be imagined, the attention is not much relished when it comes to the turn of the last person at the table.

If the Chinese are peculiar in the way they eat their dinner, they are even more so in their choice of the dishes composing it. Though some of them are pleasant to the European taste, and in a few cases even delicious, the majority of the dishes are more or less repugnant to any one who is not used to Chinese fare, and often so nasty, that consideration for the feelings of the host is of no avail when one is called upon to eat them. A taste for the flesh of domestic animals is particularly prevalent amongst the Chinese of all classes. In nearly every city in China are to be found restaurants where dog's and cat's flesh is made a special feature in the bill of fare. The meat is cut into small pieces, after being cooked over a slow fire. It is then fried with water-chestnuts, garlic, and oil; and those who have tasted it say that it makes a very palatable dish. In the windows of the restaurants may be seen carcasses of the animals hung up for show; and placards and bills of fare displaying the appetising announcement that cats and dogs can be served up at a few minutes' notice. The flesh of black-haired animals is considered the best, not so much for the taste, but because

it is supposed to contain more nourishment. The dogs are killed by strangling or stabbing, and their carcases are then boiled for a time, to remove the hair; they are then cleaned and prepared for show in the windows. Dog hams are exported from the province of Shan-tung, and, according to Mr Gray, at the commencement of summer a ceremony called *a-chee*—consisting of the eating of dog's flesh—is observed throughout the Empire by all classes. Black cats' eyes are considered an especial delicacy, and at an official dinner which the writer once attended about a hundred of them were used to make one dish. Their appearance in the plate is, as may be imagined, the reverse of appetising.

In several towns in the Yang-tse Valley, the flesh of mules and horses is much eaten; and rats—which, by the way, are very clean-feeding animals naturally—are a favourite and common article of food. They are to be found hanging outside shops everywhere in a salted and dried state.

Amongst other curious articles of food are preserved eggs. Boiled eggs as we know them are never eaten, but in their preserved state they are a very favourite article of diet. The eggs are first washed, and steeped for a few hours in water which has been rendered aromatic. They are then taken out, and the water is used for making a paste of salt and lime. This paste is turned into a tub and the eggs buried in it, after which it is hermetically sealed and kept so for at least a month. Often, however, eggs are kept for years in this state, and when very old are considered a great delicacy. In fact, a Chinese gentleman lays down his eggs as his English *confrère* lays down his port. The eggs when very old are quite black, and, to a European palate, almost tasteless, and quite odourless.

Ducks, fowls, and geese are much eaten by the Chinese. The eggs are hatched generally in large incubators, of a primitive though practical description, and are sold in markets set apart specially for the purpose. In the case of ducks, every part of the bird is eaten or preserved, and, indeed, this absence of wastefulness is a peculiarity of Chinese cooking. The fowls are carefully dieted and nursed from the time of their birth, and much pains is taken to keep the different breeds true and distinct. Fish of all descriptions are as much appreciated in China as they are in England. Oysters are never eaten raw, but fried, as the Chinese maintain that it is bad for the body to chill it with cold food. Shrimps are much appreciated, but are generally eaten in a condition which would not suit a European palate. They are served up on the table alive, and swimming about in a glass vessel containing water diluted with strong vinegar and oil. This makes the shrimps tipsy and lively; and while they are rushing about in the water, they are plucked out quickly and eaten alive. All fish, both sea and river, are sold and cut up alive by the salesmen, who carry them through the streets in two large tubs, slung one at each end of a bamboo, and filled with water.

Fruit—of which there is every conceivable

kind—always finds a place in the Chinese menu. All the so-called English fruits are grown in China, and the tropical ones as well. Amongst those fruits peculiar to the country are the li-chee—of delicious flavour—the carambolo, and the wampee. Water-chestnuts, which grow at the bottom of small rivers and brooks, are gathered by hand, and are very nice eating; and when boiled and beaten, are used as a kind of flour.

It is impossible within the limits of a short article to do more than touch the list of curious dishes to be found in China. Some mention, however, must be made of the drinks of that country. Tea, of course, is the national beverage, and is not drunk in anything like the manner that we are accustomed to. Such additions as milk and sugar would be considered abominations; and the tea—which the Chinese cooks infuse far more carefully than we are in the habit of doing—is drunk by itself. Some kinds of tea which rarely find their way to European markets are of a most delicious and delicate flavour when drunk in this manner, and are much sweeter and more syrupy than the ordinary tea as we know it. Spirituous liquors are obtained from rice and barley, and wines from grapes; and, judging from the condition of the company at the end of an average banquet, the worship of Bacchus is as devoutly carried on in China as it is in England.

THE LAWYER'S SECRET.*

CHAPTER XXIX.—A SURPRISE FOR MR FREDERICK BOLDON.

BEFORE many days had gone by, Hugh Thesiger went down to his uncle's cottage to recruit his strength by a few weeks' rest, and Lady Boldon at the same time returned to Roby Chase. She had plenty of work before her, for she knew that within a short time she must quit the house, and give up the estate, and all that could properly be said to belong to it, into the hands of Frederick Boldon. She must descend from the pinnacle she had occupied in the social world, and be married from her father's house, just as she would have been if she had never sacrificed herself for money and the privilege of hearing people say 'Lady Boldon' and 'Your ladyship.'

As she paced to and fro on the terrace in the cold winter sunshine, on the afternoon of the day on which she returned from London, she could not help looking back upon the past, and reckoning up the result of her grand marriage. In the first place, she had sacrificed her own inclinations—had, in a word, sold herself in order to be mistress of Roby Chase. The bargain had seemed a comparatively easy one before it was completed; she blushed now to think that she should ever have stooped so low. She had driven her own true love from her side, had inflicted a cruel wound upon his heart, and had all but lost him for ever.

* Copyright reserved in the United States of America.

While her husband lived, she had been little else than his hired servant; and she had been unable to enjoy wealth when it became hers. She had never been able to feel that she was in any sense the owner of the great house and the grounds that surrounded it. In addition to all this, she had stooped to deception; she had long endured a wearing, ceaseless anxiety, and anxious foreboding; she had brought on herself and her lover shame, misery, and a horrible danger, from which they had escaped as it were by a miracle.

Against this long list of evils she had nothing to set but the gain of a few thousand pounds—a very few; for she had determined that half of what she had should go to Marjory. She owed Terence O'Neil more than she could ever repay; and she knew that he and her sister could not be married for many years without substantial help. This was, indeed, the only good result that would be reaped from her sowing of wind; her own gain was not to be weighed for a moment against the years which she and Hugh had lost.

Hugh came over to the Chase next day, and pressed his betrothed to give her consent to an early marriage. If they delayed, he said, people would hint that they were saving up money which ought in fairness to belong to Frederick Boldon. Having gained this point, he next begged her to consider whether it would not be better for them to emigrate. He might, he said, practise his profession in one of the colonies, or in the States; but he doubted whether he could ever do so in London with tolerable comfort. No doubt, they had both been honourably acquitted; but they would be marked out for impertinent curiosity and tittle-tattle for many a day to come. All this was true; and Hugh did not even tell the whole truth. He did not say how he shrank from going among his old associates, doing the work of an advocate, and perhaps defending criminals brought into the very dock where he himself had stood on that terrible day. It was in vain that Hugh told himself that such feelings were morbid, and even cowardly. He could not prevent them; and he felt inwardly sure that they would hinder him in his work, and prevent his being a successful advocate. To Lady Boldon, however, he merely said that he would feel it to be a relief to leave London for ever.

'But my father, Hugh?' said Lady Boldon gently. 'And my mother, and your uncle and aunt?'

'That is the worst of it. I confess the parting would be a dreadful shock to them. They could hardly hope to see us again.'

'It would be a poor return to your uncle and aunt for what they have done for you,' said Adelaide gently.

'You are right. I cannot do it—and yet I feel that London is not the place for me.—We will talk of it again, dearest.'

They did talk of it many times; but before anything was settled, Frederick Boldon began his suit for the probate of Sir Richard's will. Hugh paid no attention to this action, as he considered it to be purely formal.

One day, however, Lady Boldon sent to him, begging him to come to her, and on his arrival she put into his hands a letter which she had just received from Messrs Fraser & Smith, the solicitors who had instructed counsel to defend her when she was tried. The lawyers told her that the trial of Mr Frederick's action for establishing her late husband's will would take place on the following day, and that it would be necessary for her to be present at the hearing.

'It is a nuisance, isn't it, Hugh?' said she, as her lover finished reading the letter.

'It is entirely unnecessary for you to go,' he answered. 'The trial is a purely formal affair; and what I cannot understand is why this firm—Fraser & Smith—should have opposed the will being proved in common form, that is, cheaply, without any litigation. I must say it looks very much like an attempt to run up costs.—Did you tell them to go to the useless expense of defending this action?'

'I? No; I never spoke a word to them on the subject.'

'They are your father's lawyers, aren't they? Probably they got him to say something which they could construe into a request to defend the action. It is absurd. It is too bad. I have a great mind to run up to town and give them a piece of my mind.'

'Very well, Hugh. Mrs Embleton and I can go with you; and then you can take me to see the action tried. The lawyers seem quite anxious that I should be there.'

Hugh laughed. He was unwilling to return to London; but he saw that Lady Boldon had more confidence in the lawyers' letter than in his advice; so he rather unwillingly agreed to be her escort to town next day.

They were forced to leave by an early train, in order to reach the law-courts by half-past ten. There was no time for Thesiger to call at the solicitors' office and demand an explanation before going on to the law-courts. As it was, they found that by the time they reached the court the case had begun.

Mr Griffith, Q.C., was Mr Boldon's counsel. He had finished his opening speech, and was now calling evidence to prove, by a comparison of the handwriting, that the signatures to the will were really those of Sir Richard Boldon, Mr Felix, and Mr Lynd, the curate. Hugh Thesiger whispered to Lady Boldon that Mr Soames, who had been her counsel at the great trial, and another barrister, seemed to be engaged in the case on her side. 'Fancy briefing Queen's Counsel in a case of this sort,' said Hugh, with a snort of indignation; 'it is preposterous. The expense will be dreadful.'

'Isn't that Mr O'Neil sitting down there at the large table?' whispered Lady Boldon. 'He hasn't got his wig and gown on.'

'Where?—Oh, I see!—So it is. What can he be doing here? I suppose he merely dropped in out of curiosity.'

The witnesses, of whom three or four were called to speak to each signature, were but shortly cross-examined, and were rapidly disposed of. A certificate was also produced which stated that the Rev. Stephen Lynd was detained in an asylum.

'That is our case, my lord,' said Mr Griffith, looking round with some curiosity to see what Lady Boldon's counsel would do.

Mr Soames slowly rose to his feet. 'My lord,' he said, 'my instructions are that, in the first place, these are not the signatures of Sir Richard Boldon, Mr Felix, and the Rev. Stephen Lynd; and, in the second place, that even if Sir Richard did sign the document, he did not do so in the presence of the witnesses, as the statute requires. Unfortunately, my lord, I cannot call Mr Felix, since he is dead. But I can call the other witness, the Rev. Stephen Lynd.'

'Why, he's in an asylum!' said Mr Griffith in a stage-whisper, as he bent over to speak to the solicitor who instructed him. In the meantime, some one was coming forward to give evidence; and the moment he appeared in the box, Lady Boldon and Hugh Thesiger saw that it was undoubtedly Mr Lynd, and no other. The ex-curate looked a little pale, but seemed quite collected. He was duly sworn; and Mr Soames began to examine him.

'Your name is Stephen Lynd, I believe—you are a clerk in holy orders—and from June 18—to October 18—, you acted as curate to the Rev. Rowland Bruce, the Rector of Woodhurst?'

'Yes. I left Woodhurst on the 2d of October 18—, and was taken to an asylum at Fairfield, in Kent.'

'When did you leave the asylum, and why?'

'I left it two days ago, because I was cured. I have the papers and certificates with me.'

'Very good.—Now, Mr Lynd, in spite of this unfortunate mental attack—'

'Don't lead, please!' cried Mr Griffith, Q.C., half angrily.

Mr Soames regarded his learned friend with a fine affectation of mild surprise and gentle reproach.

'Tell us, then, Mr Lynd,' he began, 'what the state of your mind is with regard to what happened on a certain day—Friday, the 20th of September 18—.'

'I have a perfectly clear remembrance of that day.'

'What fixes it in your memory?'

'I saw Sir Richard Boldon that day for the last time.'

'Tell us what passed between you and him.'

'Our conversation was chiefly about religious matters—such conversation as would naturally pass between a clergyman and a man who was near his end. Before I left him, however, I ventured to speak to him about his will. I did this in consequence of a short talk I had had with Lady Boldon. He told me he meant to make a new will, providing that his widow should lose the estate if she married again. I argued with him that this was a harsh and unjust provision, which often led to trouble, quarrels, and so on. I reminded him that he had no children, and that if he wished to benefit his heir, he could divide the estate. Eventually, he said he would take my advice, and leave the arrangement made upon his marriage undisturbed.'

'Did you then leave him?'

'Yes.'

'Did you see him sign a will?'

'Never. I never saw him sign a formal document in my life.'

'Did you ever witness his signature?'

'Never.'

'Did you know the late Mr Felix?'

'I had heard of him; but I never saw him, to my knowledge.'

'Look at that signature. Is it yours?'

'I swear it is not.'

The jury were exchanging confidential whispers when Mr Soames called his next witness. This was Mr Lynd's brother, who swore that the name as it appeared in the will was not in the curate's handwriting. Several more witnesses followed with the same testimony; and Frederick Boldon's counsel was already convinced that his client must lose the day, when Mr Soames produced a person who was almost as important a witness as Mr Lynd himself, one, too, who lay under no suspicion of mental weakness. This was James Fulton.

The substance of Fulton's evidence was as follows: He had been second footman at Roby Chase before Lady Boldon reduced the establishment on her being left a widow. He remembered the Friday in the week before Sir Richard's death occurred. That was the day Mr Felix came down from London on his last visit to Sir Richard. Lady Boldon was ill at the time, and confined to bed. In the afternoon of that day, it might be about three o'clock, Mr Lynd, the curate, called, and was shown into Sir Richard's room. Fulton himself admitted the clergyman, and took him up-stairs. It was his duty to attend to Sir Richard's bell; and he could name every one that entered the sick-room that day. Before Mr Lynd left, Mr Felix arrived from the railway station, and was shown into the library. Very shortly after this the curate left; and the hall door had been closed behind him before the lawyer was summoned from the library. On that point Fulton was positive. He first let Mr Lynd out of the house, and then went and told Mr Felix that Sir Richard was ready to see him. The lawyer never met Mr Lynd at Roby Chase that day—least of all in Sir Richard Boldon's room.

Such was the substance of the footman's evidence. His testimony was conclusive; and it remained unshaken by all Mr Griffith's cross-questioning. Within a few minutes after Fulton left the witness-box, the jury returned a verdict against the will.

The bustle that followed upon this told Lady Boldon that the case was over. She thought she had won it; but she did not dare to believe in her good fortune.

'What does it mean?' she whispered to Hugh.

He turned and saw that her cheeks were aglow, her eyes sparkling, and her breath suspended from her excitement.

'It means,' he said in a voice hoarse from emotion—'it means that the poor wretch who was killed by the cocaine forged a will on purpose to keep you in his power! The cruel, calculating villain! Well; he is dead—he is dead.'

'But if this will was forged'—

'Then, of course, the one which was read on the day of the funeral stands good. Roby Chase and the estate belong to you absolutely, for your life.—Adelaide! you are not going to faint?'

'No—no; I shall be better in a moment.'—Then a minute or two later—'Oh, Hugh, I am so glad—so very, very glad! You need not grieve your uncle and aunt now, and make their old age lonely, by going away to Australia. You need never think now that you have dragged me into poverty by marrying me.—Ah!' she whispered, suddenly covering her face with her hands—'how different this is from what I have deserved!'

FROST-FREAKS.

WATER in the process of freezing assumes many curious forms under special conditions. The wonderful beauty of snow-crystals, which reveal under the microscope an infinite variety of more or less complicated shapes, always built upon a symmetrical hexagonal plan, has always attracted much attention; and the ordinary phenomena of snowfall, hoar-frost, and ice-formation are, in a manner, forced on the notice of everybody in winter. The more peculiar appearances, which are really freaks of frost, are of relatively rare occurrence, and frequently escape the notice of superficial observers.

Near Chamounix, a considerable portion of the surface of a sloping bank, bare of the usual undergrowth of vegetation, was observed to bear a coating of ice nearly four inches in depth, which presented a curious structure. It consisted of four layers, each composed of an aggregation of filaments, or elongated crystals, of uniform size, ranging in diameter up to one-sixteenth of an inch, and of a length equal to the thickness of the layer, ranged side by side like a collection of miniature organ pipes. The ends were of pyramidal shape, and the bottom points of one layer rested on the top points of the one below, so that the layers could be easily separated, while the whole mass was penetrated by vertical holes half an inch or less in diameter. The entire ice-structure had evidently been pushed up from below, as the ice itself was white and colourless; while its surface was covered by a layer of dirt which might have concealed it entirely from observation, had its presence not been revealed by broken portions. The explanation suggested was, that the porous soil forming the surface of the bank was supported by a substratum of rock, along which the water from melted snow—percolating from above—had run until it reached the place where the earth, being bare of vegetation, permitted free radiation, and consequent cooling and crystallisation of the water; the ice thus formed forcing itself up through the pores of the soil as filamentous ice-crystals, each layer being the work of one night's frost, and the perforations being due to the presence of pebbles, or lumps of earth too dense to allow the crystals to penetrate, or too heavy to be lifted up like the smaller earthy particles which covered the greater part of the ice.

Similar collections of filamentous ice-crystals

have been observed in many places. They are common in certain localities where the necessary conditions are present, and, no doubt, would be more frequently noticed but for the surface layer of soil raised by the ice-growth which masks its presence. An official of the United States Geological Survey states that in the cultivated fields of the Mississippi Valley, on a cloudy day following autumnal rain, with the air just below freezing, he has during a day's journey seen a thin layer of soil elevated in this way from one to three inches over four-fifths of the area visible from the road. In the neighbourhood of Washington he saw many irregular patches and belts of straight or slightly curved filamentoid ice-crystals, four, six, and even eight inches in height. Sometimes these crystals were longest when supporting the greatest weight of earth or pebbles on their summits. In one case, a pebble two and a half inches long, one and a half broad, and an inch thick, was borne aloft by a slender tuft of icy needles six or seven inches long, fully two inches above smaller pebbles and the film of soil in which it had been embedded.

A similar process of congelation in capillary tubes has been observed to produce a covering of filamentous ice on dead branches and twigs. When a dead beech branch bearing such a coating was taken home and left in the sun, the crystals soon disappeared; but next morning they appeared again, the water from the melted ice having again filled the pores of the wood, from which it was once more extruded, on freezing, in the same filamentous form. Professor Schwalbe noted in the Harz Mountains swellings on decayed twigs lying on the ground, which were caused by ice-excrecences pushing the rind away from the wood. These ice-growths were composed of fibres of a soft, brilliant, asbestine appearance, which were remarkably delicate to the touch. They adhered to the body of the wood in large numbers, and attained a length of nearly four inches. Professor Schwalbe brought some of these withered twigs with him to Berlin, and found that it was possible to reproduce the phenomenon at any time by thoroughly moistening the twig, but in such a way that no water dropped off, and then cooling it slowly in a freezing apparatus. The peculiar appearance is a result of capillary action similar to that which takes place in porous soil. The columns of water contained in the capillary tubes expand in length during freezing, so that a small column of ice is continuously projected upwards by the continued congelation of the water sucked up by the capillaries.

In a railway cutting near Lesmahagow, in October 1892, some ice-crystals were observed over a curiously circumscribed area of about nine feet in length, on both sides of which the ground was hard frozen. From a base of very porous opaque ice there sprang groups of acicular crystals of clear ice, each needle free and distinct throughout its length, and masked by opaque bands of slightly larger diameter. The crystals averaged an inch in length and about one-sixty-fourth of an inch in diameter. Each cluster of about forty or fifty crystals formed an irregular square of about one-fourth of an

inch on the side. Some grew vertically from the ground, and others horizontally from the sides of the cutting. They were straight, curved, or bent into a half-circle. A week later, crystals of the same kind were observed as long as two inches.

In an old mine on the Waschgang, near Dölloch, in Carinthia, large fans, as much as a foot long and eight inches broad, composed of ice-crystals, are reported as having been seen growing out horizontally from the walls. The stalks of these curious structures, consisting of a series of hexagonal prisms, hollow, like thermometer tubes, were in the middle about an inch thick, and increased in size towards the points of attachment to the wall. The fan surface was a large hexagonal plate with strong prismatic ribs running from the centre to the angles, and the interspaces between the ribs were filled with regularly arranged prisms, while other peculiarly shaped tabular and prismatic crystalline structures grew on the ribs.

The ordinary ice-sheets which cover lakes and ponds sometimes show peculiar structures, more especially after thaw has set in. In December 1891, the ice-surface of a lake at Drinkwater Park, near Prestwich, during a thaw showed a large number of very distinct hexagonal tabular crystals, from half an inch to three inches across, and raised an eighth of an inch above the rest of the ice. Many of these crystals bore similar but much smaller crystals in the middle, also projecting about an eighth of an inch.

Close examination of lake-ice shows that it is frequently built up of vertical columns of regular hexagonal shape, of varying diameter, and in length equal to the thickness of the ice-sheet. The columns become visible to the naked eye when the ice begins to melt, and the structure, according to Professor Bonney, is best exhibited when a very gradual thaw succeeds hard frost. Dr John Rae, in his Arctic experiences, frequently noted both on deep lakes and those so shallow as to freeze to the bottom, that when the winter ice had nearly all thawed away, what remained assumed the columnar structure. On deep water, though it could be safely walked over in the morning, being then six or eight inches thick, and apparently quite solid, it had all magically disappeared a few hours afterwards, as the columns rapidly separated from each other, especially if there was a breeze, and falling on their sides, became invisible, and drifted to the lee side, leading to the general but erroneous idea that the ice had sunk. Experiments have led to the belief that this structure may be due to the first layer of ice having been formed rapidly, with the air at a temperature several degrees below freezing; and doubtless the nature of the first crystals formed settles the structure of all the rest of the ice.

It has been found by experiment that when lake-ice about half an inch thick is struck with the rounded end of a stick, the fractures produced invariably take the form of six-rayed star-like figures, which show beautiful regularity in regard to the number, position, and perfect straightness of the rays.

Domestic utensils during very severe frost

are sometimes found to contain curious forms of ice. A ewer or other deep vessel may in the morning be full of slender ice-spicules, many of them several inches long. In a water-tub with an ice-surface already formed, which had been placed under a tap so that the ice was submerged under several inches of water, fresh ice formed in the shape of thin vertical plates upon, and at right angles to, the submerged sheet. These plates, meeting each other in all directions, produced a spongy mass three or four inches in thickness. It is a curious problem why a sheet of ice should increase regularly in thickness by additions to its lower surface, while only a spongy mass is formed on its upper surface.

The freezing of deep and comparatively still water sometimes causes what are called 'anchor frosts.' In one particular situation where the phenomenon is fairly frequent, the whole body of the water in a mill-pond, where the current is stopped during the night, becomes semi-viscous. As far down as can be seen, the roots beneath the water and the brickwork sides of the pond are coated with ice, and between this and the surface, ice-crystals form, not in sheets or blocks, but interlaced loosely, like snow-crystals in a drift. The spongy mass thus formed blocks the channel, and water coming down on it from above rises in level, and flows over it, as over a solid obstruction. When the mill is started, the water at first will hardly flow past the wheel, until the crystals are at length forced to the surface, where they remain in floating masses, under which the water flows as usual. In such frosts, there is no sheet of ice formed on the surface.

The beautiful appearances due to hoar-frost are occasionally much enhanced under specially favourable conditions. Thus, on one occasion, with the ground for some distance around frozen hard and white with hoar-frost, the great granite masses of Yes-Tor, on Dartmoor, appeared to be covered with feathered work exquisitely wrought in congealed snow. The feathers overlay each other as thickly as real plumage, and ranged in length from one to five or six inches. The display was almost entirely confined to the eastward—at the time the windward—side of the rocks, and their jutting and exposed portions carried the thickest covering. The flagstaff surmounting the Tor was loaded on the windward side with a fringe fully six inches deep. The individual flakes revealed remarkable beauty of structure. Most were of an elongated lozenge shape; some were shaped like tongues of flame; and all were built up of thin plates, into which they could be resolved by a slight blow. These thin plates again split up into crystalline needles in a direction parallel to the longest diameter of the flake. The beauty of this natural decoration is said by those who chanced to see it to have been quite indescribable. Only the finest Oriental decorative tracery could approach the effect of the infinite variety of this rich tapestry of frost-flakes.

The beginning of this giant hoar-frost must have been formed by a thin layer of very fine mist drifting against the rock and freezing on it in minute crystals; and on this foundation,

successive accretions, brought in the same way, would continue to be built up crystal by crystal, each adhering to the very tip of the preceding one, while the suitable atmospheric conditions lasted. These conditions are probably clear frost, without snow, which would destroy the delicate forms; a moderate breeze, blowing steadily in one direction; and air saturated with moisture in a finely divided state.

In the same way, when the ground and the air are below freezing-point, the drifting fog which is prevalent on the top of Ben Nevis deposits small crystalline particles of ice on everything in its path, forming long feathery crystals on walls or sloping surfaces, and on posts or small objects producing shapes resembling fir-cones with the points to windward. The crystals gather round the edges of a flat board, while a round post secures an almost uniform coating over its windward half. The growths point to windward so exactly that it is possible to trace small changes in the direction of the wind from the different angles of successive layers. The rate of growth varies with the density of the fog and the strength of the wind; but ordinary fogs and winds deposit about half an inch per hour on the average. There is practically no limit to the accumulation. A post four inches square grew in less than a week into a slab of snow five feet broad and one foot thick, when the mass fell off by its own weight, and a new formation began. The observers on this exposed situation have had ample opportunity of investigating this freak of frost; but their interest in it is considerably abated by the trouble it causes with the various instruments placed out of doors, which require almost constant labour to keep them free from ice-crystals while the conditions continue which promote their growth.

In Devonshire, during a keen frost with excessively moist air, the landscape was transformed, according to one observer, into a perfect fairyland, by a wonderful rime which covered trees, down to the smallest twig, with ice nearly an inch in thickness. The leaves of laurel were so coated that off each an ice-leaf could be taken—a perfect reproduction in transparent ice, twice the thickness of ordinary writing-paper, on which every vein was distinctly marked.

The phenomenon known as silver thaw or 'glazed frost,' which is frequently, but incorrectly, described as being of the nature of hoar-frost, is really the frozen surface occasionally produced at the beginning of a thaw by the sudden setting in of a warm wind. Damp air passing over ground of which the temperature is still very low parts with its moisture in a solid form, covering everything with a sheet of ice; and the intensity of the phenomenon is much increased if there is rain at the same time. Such frosts sometimes do much damage. In France—department of Loiret—rain fell continuously during the three days from the 22d to the 24th of January 1879, though the temperature ranged from twenty-four to twenty-eight degrees, and was solidified as soon as it touched anything. By the evening of the second day the effects had reached terrible pro-

portions. The ground was strewn with branches, whole trees were uprooted, and others split from top to bottom; and in some places the forest looked like one of masts, so completely had the great weight of ice stripped them. As examples of the tremendous growth of ice, a lime-twig weighing four and a half grains weighed with the ice on it nine hundred and twenty grains, and a laurel leaf carried a coating of eleven hundred and twenty grains. Evergreen shrubs were transformed into solid blocks of transparent ice, through which leaves and branches could be distinguished. The branches of fir-trees were weighed down, each group on to those below, and the lowest on to the ground, so that the whole assumed the appearance of huge pyramids of ice. In some recorded instances of glazed frost, the drops of rain were not frozen by falling on objects colder than freezing-point, as sometimes happens, but were probably in a state of superfusion, and solidified on coming into contact with solid bodies.

The beautiful arborescent patterns formed by frost on window-panes are familiar. A modification of this special form of ice-crystallisation was observed on some London street pavements in December 1892, as reported by Professor Meldola. During a keen wind, the paving-flags of several streets running east and west were covered with a striking vegetable-like pattern, which differed from the small, delicate frost figures seen on window-panes in being made up of large and boldly fronded designs, the gracefully curved fronds attaining a length of one to two feet. Other observers noted at the same time somewhat different patterns, consisting of scrolls and volutes. Several of these sometimes radiated from a common centre, and extended over several feet of the pavement. In Freiburg, some pavement patterns took the form of dark, broad, sharply defined, leaf-like patches, connected together by curved and branched tendril-like stalks. These different patterns may be attributed to the rapid freezing of the water contained in the mud of the pavements; and all arborescent forms assumed by water during freezing are probably the result of impeded or constrained crystallisation.

THE SECRET OF VERLOREN VLEI.

By H. A. BRYDEN.

IN TWO PARTS.—PART I.

It was not until my second season's hunting with Cornelis du Plessis that I heard of Verloren Vlei, a place I am never likely to forget. Du Plessis was a Transvaal Boer, descended, as his name implies, from that good Huguenot stock which, after the revocation of the Edict of Nantes, made its way to the Cape to replenish the Dutch settlers. The French language quickly died out in South Africa, mainly from a stern repression; yet here and there, all over that vast land, you may see at this day, in the strong and stubborn Boer breed, plain traces of the French admixture. Du Plessis bore about him very certain indications of his ancestry. He was shortish for a Boer, very dark of complexion, keen-eyed, merry, alert, vigorous, and active as a cat.

Seventeen years ago, the north and east of the Transvaal, and the countries just across the border, were wild and little-known lands, still teeming with game. I was wandering through the country, hunting and exploring. The gold-fever had recently broken out, and as I understood something of mining and geology, I put in a good deal of prospecting as well. It was a vagrant, delightful existence, and I thoroughly enjoyed it.

Du Plessis and I met first in the north of Waterberg. I found him an excellent good fellow; he took to me; and we quickly became great friends. We trekked along the Crocodile River together, crossed it before it takes its southerly bend, and, for the whole of the dry winter season, hunted in a glorious veldt abounding in game. So excellent a comrade had I found the Boer, and so well had we enjoyed one another's company, that we engaged to meet again the following season. Thus, at the end of July 1876, we were once more hunting together in that wild and distant region north-east of the Crocodile.

One evening—I remember it well—we were outspanned in a delightful valley between low hills, through which a pleasant stream ran—a rare thing in the prevailing drought. We had had a good hunt that day, and the flesh of a fat buffalo cow filled our stew-pot. Our oxen lay peacefully in a strong thorn kraal close at hand—for there were lions about—and our horses were tied up to the wagon wheels; the fires blazed ruddily against the outer darkness. At one of these fires were gathered our native boys, feasting and chattering, and laughing in high good-humour; at the other, Du Plessis and I sat in our wagon chairs. We had finished our meal, and were smoking our fragrant Rustenburg tobacco and drinking our coffee, for the day had been hot, and our hunt a long and exciting one, and our thirst was still unassuaged. We were talking about gold and prospecting. The Dutchman was not over-keen about it, but he was anxious to help me.

'There's a kloof somewhere about here, Fairmount' (that's my name), he said, 'in which I shot a white rhinoceros five years ago. I should like you to see it; I remember some natives brought me a quill of gold which they had collected up there. I think you would find it worth looking at; but this country is so broken, that I can't for the life of me make out the exact spot. We shall hit it off presently, no doubt; but just now it's almost as hard to find as poor Tobias Steenkamp's "Verloren Vlei."'

'Verloren Vlei,' I replied in Cape Dutch, in which we habitually spoke. 'I never heard of the place. Where's that?'

'Alle maghte! that's a very queer story,' answered Du Plessis. 'Tobias Steenkamp was a cousin of mine. One day four years ago he came to our farm and outspanned. He had had a hard trek, and lost some oxen, and was himself smitten with fever. He stayed a week, and he was for ever talking of a wonderful *vlei** he had discovered somewhere in an inaccessible

mountain range in this direction, on the shores of which he had found much gold. He showed us some fine nuggets; and, indeed, he excited my brother Hans and myself so much, that we half promised to go back with him and have a look at the place.

'Well, Tobias got over his fever, obtained fresh oxen, refitted his wagon, and started off again for his wonderful vlei. Hans and I could not get away at that moment; but we meant to hunt in that direction, and we promised to follow him up in a little time. He left a boy with us to show us the road. In two months' time we had trekked up to the neighbourhood of Tobias's great discovery, and then we received a shock. We met his driver and servants returning with the wagon, and no master. They told us that they had outspanned near the vlei—which they themselves had never seen; that their master had started off alone up the mountain next morning—he would never permit any of his boys to go with him; and that he had never returned. They had waited and waited, and had then searched for him in every direction without result. For a fortnight this had gone on; and now they had given up the search, and believed their master dead. Well, Hans and I took the men back with us to the mountain again, and made a thorough search, and sent out parties in every direction into the country round. We might as well have looked for the Fiend himself; we never again found a trace of Tobias Steenkamp. He is dead, undoubtedly, and his fate is wrapped in black mystery. How he disappeared, where he went, I cannot say. We did find *spoor* of a man and donkey to the north-east. The man had disappeared, and the donkey had been eaten by a lion. What *their* mystery was, I know not either. We found no trace of a passage up the grim mountain walls where poor Tobias had vanished; and as for the vlei itself, well, Hans and I could make nothing of it. We never set eyes on it, and half doubted its existence. We have always called it since "Verloren Vlei," and by that name we and our friends still know it. And yet Tobias was no fool; he described the vlei very plainly to us more than once; and he firmly believed in it. Alle maghte! yes, of that I am quite certain; and what's more, he showed me the gold he had found there. It's incomprehensible.'

'That's a queer story of yours, Cornelis,' said I. 'I wonder I never heard you mention it before. How far away is this place you speak of?'

'About six days' journey from here, I suppose,' replied Du Plessis; 'and it's a rough trek.'

'Has any one else ever tried to discover this secret?' I went on.

'Two or three people only,' rejoined the Dutchman. 'Tobias's brother and three other Boers who knew him went on two different occasions; but they came away no wiser than ourselves. Neither Tobias nor his bones have ever come to light.'

We went on chatting by the fire that night, and presently turned into our wagons.

I am bound to confess that the Dutchman's grim story grew upon and fascinated me.

* Pronounced *flay*. A vlei is the Dutch name for a shallow lake.

Mystery has always a curious attraction. Here was hidden away some dark episode, in which this simple, unfortunate Boer had lost his life. I determined to try to unravel the clew; and the gold, too, lent an additional motive to the search.

I had small difficulty in persuading Cornelis du Plessis next morning to lead me to the place of misfortune. We settled to trek thither, hunting on our way: and in six days' time we found ourselves outspanned for the night beneath the loom of the great rock fortress which held so securely the Dutchman's secret. It was the hour of sunset as we neared the mountain range, which lay between us and the north-west. The sky was a sheet of red and gold, against which the rugged mass stood out in a wonderful relief. Up above the mountain tops, long skeins of great birds, all following one another slowly and majestically in an endless maze of evolutions, were silhouetted black against the flaming heavens. We were a good mile away from the nearest string, but there was a wonderful stillness of the atmosphere; all nature seemed hushed, except for the birds; and the faint notes of their peculiar plaintive whistle told me instantly what they were.

'Why, Cornelis,' I said, 'those are pelicans, and they're just going down to water somewhere in the mountains. See, there they go!'

As I spoke, the lower skein sank gently into the mountains, and presently, chain after chain of the singular evolutionaries disappeared softly within the range, until the last bird had vanished, and the now fading sky lay clear and unflecked.

'Allemaghte!' ejaculated Du Plessis in his deepest tones; 'those are pelicans, surely, and they have gone down to water. Strange that I have never seen them there before. There is the vlei, sure enough; we will never rest now till we find it.'

We were up at dawn next morning, and, as we breakfasted, we saw with intense interest the pelicans rise from the heart of the mountain, slowly circle about the sky, and then stretch their flight, in their leisurely and majestic fashion, in our direction. As they quitted the mountain, they sank lower towards the flat country, and some of them were evidently about to pass right overhead.

'They'll come over the wagons,' said Du Plessis; 'they're off for that big salt pan we passed yesterday morning.'

I dived into my wagon and took down my rifle. An idea had struck me. I pushed a cartridge into the breech, and, as the great birds passed slowly a hundred yards overhead, took aim at one and fired. The target was a big and an easy one: the stricken bird toppled downwards, turning over and over in its fall, and presently hit the earth with a tremendous thud. One of the boys ran and brought it to me. I opened its bill. The pouch contained seven fresh fish—six smallish and carp-like, well known to the Boers as *karpers*; the seventh, a 'yellow fish,' a barbel-like fish of a pound and a half.

'Here, Cornelis,' I said to my companion, 'is proof positive that your mysterious vlei lies in the mountain, and holds water. These fish are

fresh; they were caught early this morning; and the birds are away to the salt pan for the day to eat and digest them.'

We finished breakfast hastily, and sallied forth on our search. First, we followed the tiny stream near which we were camped. This led us to the westerly side of the mountain, and manifestly took its rise in some marshy ground immediately beneath the rock walls. A careful examination convinced me that the marsh itself owed its origin to some subterranean escape—very probably from the vlei itself—from within the mountains. But there was no hope of ingress in that direction. Pursuing our investigations, we rode carefully round the whole western and southern face of the mountain wall, scanning closely every yard of its surface. This mountain wall ran in a great semicircle; its dark-red, rampart-like cliffs were sheer, and wonderfully free from projections and undergrowth. We spent the whole day searching for any trace of path or ingress, and retired to our wagons for the evening completely discomfited. There was not foothold for the hardest cliff climber that ever risked his life in search of wild-fowl eggs.

Next morning, we followed this cliff face along the southerly aspect. Here, after a little way, it was met by another mass of mountains, into which it ran, terminating in a chimney-like *cul-de-sac* at the end of a short narrow gorge. Here, too, apparently, there was no possible approach upward or inward.

'It was here,' said Du Plessis, 'that the spoor of my cousin was last seen. His servants tracked him to this spot, and from there no trace of him could be found. It's a mystery I cannot fathom. He could not possibly have climbed this way.'

We looked up at the dark grim rock walls above us, narrowing so that a foot or two of pale blue sky could alone be seen, and the thing seemed an impossibility. No living man could have made his way up that terrible chimney.

Retracing our steps from this dark ravine, we tried in another direction. All the remainder of that day, and for four long days thereafter, we explored with infinite care and toil the mass of mountain on the south-east, east, and northern side of the place where, from the movements of the pelicans, the lost vlei apparently lay. We had to leave our horses behind on these expeditions; we toiled, climbed, descended, struggled, and fell, often at the risk of our necks and limbs, but were met everywhere by precipices and ravines which absolutely barred us in these directions. The mass of mountain, which trended away to the north-east for some miles, was, although much broken up, accessible with great labour, until we had approached within less than half a mile, as we reckoned, of the mysterious place we sought. Here, sheer and perfectly hopeless precipices shut us out, exactly as had been the case on the open part of the mountain we had first examined. It seemed clear that Verloren Vlei lay within a ring-fence of utterly inaccessible cliff wall.

On the fifth evening after our arrival, we lay wrapped in our sheep-skin karosses by the

fire, stiffened, sore, and thoroughly disheartened; and yet, evening after evening, just at the glorious time of sunset, the pelicans had come swinging over in their majestic hundreds from the south-east, had skeined and circled in the glowing sky, and had sunk into the heart of the mountain, and at dawn of day as regularly had they departed. The vlei *must* be there; it was heart-breaking to be baffled in this way.

I lay long that night in my wagon, thinking out some solution of the puzzle; until sleep at last overcame me. While I lay asleep, I had a very singular dream. I dreamed that I sat upon a high cliff of rock, looking down upon a fair lake of water, which lay girt in part by a sandy shore, and surrounded by a ring of mountains. It was sunset, and one end of this lake was white with pelicans. At other parts were gathered flocks of wild-duck, and round about flew bands of the swift desert sand-grouse—*Namaqua* partridge, as the colonists call them. And occasionally the flights of sand-grouse stooped in their pretty way and drank at the margin of the water. But I saw yet another sight in that singular valley. I saw a tall figure walking by the edge of the lake. Its back was towards me, and, for the life of me, I could not see its face. I gazed, and gazed; but the face never turned; and then suddenly the scene vanished, and my dream was over. Again I dreamed, and again I saw the spreading water beneath me, and the wild-fowl; but there were no pelicans and no sand-grouse. I saw, too, a figure walking along the shore. This time, the figure was different. It was shorter, and the walk was brisker; but again the man's back was towards me, and his face was hidden. And then, again, the dream faded, and I saw no more.

Next morning, Du Plessis and I sat at breakfast, still stiff and sore, yet in better heart. Our night's sleep had restored our flagging spirits. We had agreed to rest after our five days of hard work, and have a quiet day at our camp. We were later this morning, and the last of the pelicans were vanishing for their day's excursion as we sat down to breakfast. I was surprised, therefore, as I looked towards the mountain, to see a string of wild-fowl—evidently duck—circle a few times in the clear morning sky, and then drop down into the mountains again exactly from where the pelicans sank and rose. I nudged Du Plessis, whose nose was in his coffee, and pointed. 'Wild-duck!' he ejaculated—'the first time we have seen them, too. There is the vlei, truly enough.'

Half an hour later, about nine o'clock, flights of sand-grouse came overhead, and made straight for the heart of the mountain. More and more followed; there must have been many scores of them. They were the first we had seen at this camp.

My dream instantly came into my mind. I attached little importance to such things, yet the coincidence of the wild-fowl and the sand-grouse was remarkable, and I told Du Plessis what I had dreamed. Quite in a chaffing way, I said: 'We're going to discover your vlei and its secret, after all, Cornelis. Dreams do some-

times come true. I wonder, though, what on earth the two men's figures could mean?'

Du Plessis was much more serious, and said with a solemn face: 'It is not right to laugh at dreams, my friend; the Heer God sends them for some good reason, undoubtedly. I had nearly given this search up as hopeless. We must; yes, *allemaaght*! we must try again.'

A LAKE OF PITCH.

THE village of La Brea—the name being Spanish for 'pitch'—stands on an extreme point in the south-western portion of the island of Trinidad, about forty-five miles south of Port-of-Spain, in the Gulf of Paria. It possesses few conveniences for shipping. There is no harbour, merely an open roadstead; a pier has been erected, but to this ocean vessels cannot come; and, at low tide, passengers from the steamboats which pass the peninsula twice a week are rowed into shallow water in small boats, and carried ashore on the backs, or in the arms, of muscular men. For nearly four miles the shore is formed of pitch; and large black masses are perceived which appear like rocks, but are in reality bodies of asphalt. In front of the village the pitch rises from the sea as a solid barrier reef, affording better protection to the land than the unconsolidated sands and clays that extend along the coastline to the north and south. Dense virgin forests seem to cover the country, save in one place. During the after-part of the day the sun beats fiercely on this coast, and, the thickness of the vegetation excluding the breeze, the temperature, further augmented by refraction from the heated surfaces of the asphalt, becomes well-nigh unbearable.

On landing, we come to the singular village itself. In the gardens and elsewhere, portions of asphalt abound on the surface, either in detached pieces, or in extended sheets or layers of several tons weight, having burst through the soil, which rests on immense strata of asphalt. This substratum affects many of the buildings in an extraordinary fashion. Their foundations occasionally sink perpendicularly into the earth and asphalt; but more usually the displacement of the pitch is such as to cause the posts to diverge from the perpendicular, apparently endangering the stability of the dwellings. Not in the least alarmed, the inhabitants go their ways as though nothing were amiss, for the movement of the asphalt is too gradual to cause accidents. Houses seldom or never fall, but—to use the expression of the people—regain their plumb. They are made of light materials, and often when one seems on the point of collapsing, through some action of the substratum it not only rights itself, but begins to lean in a contrary direction. A strange case of trespass is said to have been brought before the magistrate of La Brea, where the plaintiff alleged that the defendant's house bodily intruded on his (the plaintiff's) land.

Inland from the village, up a gentle slope, the ground becomes more and more full of

pitch. 'It is fortunate,' as a writer remarks, 'that the pitch, when compact, will not kindle, or, in other words, will not burn without a wick; for otherwise the entire region might suffer the fate of Sodom and Gomorrah.' From three sides—north, west, and south—the land slopes gradually upward from the sea to the lip of the lake, which has an elevation of one hundred and thirty-eight and a half feet above the gulf. On the east, the rise continues somewhat; so that the lake differs from ordinary lakes in being situated, not in a valley, but on a hill-top. As the mile of country stretching between the point and the lagoon is traversed, at first large cashew trees are passed, and numbers of *conucos*, the South American term for a house and small cultivation. The bituminous soil of the locality is wonderfully fertile, and pine-apples especially, both dark-red and yellow, are here produced of matchless quality. By-and-by a place is reached where no house or cottage or hut can be erected, and the vegetation is poor and marsh-loving, finding its nourishment in the sloppy water everywhere about. The plateau widens, and, at length, before us the spectacle presents itself of this famous lake of pitch.

No exact boundary of it can be said to be defined by nature, but a recent Government survey estimates its surface at one hundred and nine acres nine perches. In form it is circular, and it is believed to contain several million tons of asphalt. Persons who are acquainted with the aspect of a large round pond, partially dried up, its bed intersected with little channels of water, here and there patches of stunted vegetation, and in the centre a slushy-looking spot, the whole black and unprepossessing, can form a very fair idea of the general appearance of the lake. Innumerable bubbles of gas arise, chiefly at the sloppy-looking place technically known as 'the place of supply,' both from the pitch and the water, of evil smell, like that of sulphuretted hydrogen combined with petroleum. Swellings of different shapes and sizes are likewise come across, the smaller kinds containing only gas, while some of the larger ones contain both gas and decayed vegetation. There are a few dozen land-islets over the lake, towards its borders; they are covered with vegetation, and some of them support clumps of dwarf-trees. These, taking advantage of the slightest accumulation of earth, —for the islands do not come up from the bottom of the lake, nor do they bear down any considerable distance into it—dart their hardy roots into the underlying asphalt, and enjoy a precarious existence; and about and above them flutter beautiful birds and insects in plenty, making a curious contrast to the weird Stygian environment. If one of the islands is destroyed, the pitch under it rises to its own level, or the general level of the lake. Probably they are by no means stationary, but constantly change their places and number, owing to the imperceptible yet incessant movement of the pitch.

Passing the islands, we come to an open space—say, fifty acres or more—where no vegetation whatever grows, and within which is located 'the place of supply'—that part of the

lake where the asphalt is still oozing up. The pitch is fresher-looking than that surrounding it, and softer to the feet. At the more distant edges, one may walk on some of it without sinking below the heel of the shoe. If we stood still awhile, we should soon be ankle deep. What is called 'the place of supply' undergoes unceasing change in shape and size. Here the pitch is always softer, and during the hotter part of the day, it—or rather the water surrounding it—fairly boils. These soft parts continually alter in position. Witnesses are known to declare that on occasions none may venture within this terrible spot, on account of the intense heat, and for fear of being horribly engulfed. A late visitor states that one afternoon he saw a man walk into it with impunity, and it only came up to the calves of his legs. Early morning is the best time to see this phenomenon, when, under favourable conditions, one might manage to walk over the softest spot without sinking more than ankle-deep.

The network of channels referred to are deposits of rain-water, and cut up the lake into numerous irregular divisions, since the pools frequently unite, forming one connected system. Roughly speaking, they are from two to six feet wide, and one to two feet deep, though in places, and if swollen by rainy weather, the depth and width of the water are much increased; in fact, in the wet season the hollows are so full as to prevent the lagoon being seen properly. Their sides are convex, presenting outlines of regularity and beauty; and where three or four channels meet, a star-shaped depression is formed. Those who live in the neighbourhood of La Brea consider it conducive to health to bathe in the chasms. A stream of pitch, on coming into contact with the water, rarely, if ever, shelves gradually into it; but at the water's edge tends to curve down sharply, and under the water does not adhere freely to the pitch on the adjoining area.

Several explanations of this peculiar structure have been advanced. It is a matter of common belief that the pitch is in constant motion, and one theory ascribes an independent revolving motion to each of these irregular divisions. In the centre of the area the pitch is supposed to perpetually rise, displacing the mass previously there, and forcing it outwards; and the latter, when it meets the adjoining division, turns under, to be eventually thrown up in the centre, as before. This process, and the structure resulting therefrom, Mr Crosby attributes to the great daily range in temperature of the surface of the lake. On cloudless days, the asphalt attains a heat of about one hundred and forty degrees Fahrenheit, and sinks at night to sixty or seventy degrees—a variation which must produce a considerable change of volume. 'This expansion is superficial, and its chief tendency is to extend the pitch horizontally. Where the pitch is covered by water, it will not experience this alteration of volume, and these protected areas are forced downward by the expansion of the unprotected areas.' It seems evident, however, that the water and the outer part of the adjoining area of pitch have

a strongly repelling effect upon the advancing pitch; and perhaps the depressions, if they do not originate by the collection of water on the spots, at least are kept in existence by the water. To express it differently, were it not for the water the pitch would doubtless find its own level. The spot known as 'the place of supply' is probably a source of general motion.

The pitch is quarried by excavating areas from a few to many feet deep and wide. As soon as the work ceases the cavity begins to close, with a rapidity depending upon the location. Near 'the place of supply' an excavation four feet deep and eight feet square, for instance, would fill in less than two days. Were it made where the asphalt was of average hardness, it would become entirely obliterated in five or six days, though it would substantially fill up in less time. Outside the lake, the refilling is much less rapid. This speedy closure of artificial cavities has led to the supposition that the supply of asphalt is inexhaustible, the substance being produced or generated as fast as removed. The circumstance arises from the plastic nature of the ordinary bitumen, which invariably yields to pressure, until a new equilibrium is established; thus, where excavations have been opened in the solid asphalt, the pressure of the sides forces up the bottom, and the cavity gradually closes. It will be manifest that this property of susceptibility to pressure is sufficient to account for the appearance of the solid and semi-solid pitch at the surface; the greater the depth, and consequent pressure of the superincumbent strata, the greater will be the force propelling the material upwards. This lake appears to be simply a great mass of pitch, which has been expressed from sandstone or shale and collected in a basin-like depression of the strata. The form of the surface has been pre-eminently favourable for a large accumulation, and the sources have been very rich. Taking into consideration the presumed amount of the contents of the cavity, the forces concerned in the elevation of all this matter to the position it occupies must have been considerable.

No soundings have been made of the lake, and the depth is unknown; it is therefore impossible to determine whether it is practically inexhaustible. In judging of the probable permanence of the supply, it is well to remember that at the softer places the pitch is doubtless still escaping from the sandstone, though perhaps very slowly. This activity is as nothing compared with what prevailed at the epoch when this immense deposit was formed. Relatively, the sources are now exhausted; but the substance remains—a testimony of the magnitude of the actions which were here once in operation.

The semi-fluid condition of the asphalt—in which state it flows but slowly—on first rising to the surface is due to an oily element which acts as a solvent. On exposure to the sun and atmosphere, this gradually evaporates, leaving a more solid substance. Many authorities refer the bituminous matter scattered over the La Brea district to streams which issued from the lake and protruded into the sea. This is quite

a mistake. Solidification of the pitch would have ensued long before it had advanced that distance. The surface of the lake has indeed overflowed, but only a few yards, and this asphalt presents curved surfaces—the form the material seems always to assume when proceeding vertically—and does not appear as an extended sheet. These bituminous layers or masses are unquestionably the products of the soil and substratum.

The proverb, that one cannot touch pitch without being defiled, does not hold good here. It may be picked up at 'the place of supply,' and manipulated in any way one chooses, for a length of time before it becomes sticky, and nothing is left on the hands save a little water and clean gray mud. This earthy admixture (twenty to thirty per cent.) has been derived from the strata from which the pitch has emerged; but while it prevents it soiling, it renders it less valuable, the decrease in value being in proportion to the excess of foreign substances.

The Earl of Dundonald appears to have been the first to bring La Brea pitch into commercial notice. As early as 1851, he acquired part of the lake and adjoining land for a period of twenty years, and in 1865 made over his lease to a company, organised with the view principally to distil petroleum from the asphalt. In 1871 the then governor of Trinidad decided to put up to public auction the unleased portions of the lake, and also the remainder when the existing leases fell in, in lots of, as nearly as possible, five acres each. Special rules were promulgated under this scheme, and soon the whole lake, with the exception of one five-acre lot withheld by the Crown, became the monopoly of four lessees. In 1886 the Government resolved to throw open to the market the five-acre lot that they held in reserve. When it is realised that this lot could furnish as much pitch as the rest of the lake, owing to the excavations refilling, the seriousness of this conclusion will be understood. By it the lessees had no choice but to carry on business without 'protection' or to give up the business.

Finally, however, other arrangements were made with the Government, by which concession to the existing lessees of the exclusive right to win pitch from the lake was granted for twenty-one years, a term subsequently extended for twenty-one years longer. Thus was happily regulated the Trinidad supply of a material, the trade in which was even then enormously on the increase.

Its usefulness seems to be now established, chiefly for street pavement. For this it has to enter into competition with macadam, granite-cubing, and wood, and other powerful competitors; but its superiority over every rival is almost universally acknowledged. Asphaltic pavements are in extensive demand in the cities of the United States, and in Europe, especially in France. England seems to have a preference for the employment, not of natural bitumens, but of coal-tar, which makes a roadway of much inferior quality.

As regards other economical capabilities of Trinidad asphalt, a number of oils with various applications can be extracted from it. Unlike

the bitumens of some countries, according to the researches of chemists in the United States, it yields none of that valuable substance paraffin. The negative results in respect of this material were from the solid asphalt of the lake. Its fertilising influence on the soil where it occurs marks it out as an excellent manure. It might form a cement in the construction of piers, breakwaters, and sea-walls; a bituminous concrete in the foundations of lighthouses and bridges; pipes for the conveyance and distribution of water; and coating for water-channels in porous strata. But these and many similar propositions for its utilisation notwithstanding, it offers a fertile field of study for the enterprising. Even as a street paving its sphere of usefulness is practically untouched. It is to be hoped that, like many other of the earth's treasures, now showing themselves fitted for a multiplicity of purposes not dreamed of formerly, its true worth and adaptability will be yet more fully realised. La Brea, for some time to come at any rate, is well able to stand an even increasing drain upon its resources.

AUTUMN LOVERS.

By G. B. BURGIN.

WE are always very much hurt if casual visitors to Benfield do not at once grasp all the salient points of that interesting town. Our usual method with distinguished foreigners is to take them to the bridge, and, pointing to the zigzag course of the New River, with the little bridge over it leading to Miss Prudence Pembarth's house, ask them what foreign city it at once brings to mind. Then they look round at the new Methodist church—the village green, gay with gray-and-white geese and grotesque ganders—the old elm-trees, full of sable-coated denizens, and reply, with the air of folk who have at once guessed the problem: 'What does it remind us of? Oh, Peckham Rye, or the Hampstead Ponds.'

We dissemble our disgust, and say encouragingly: 'Think again. Now, the bridge, for instance, hasn't it a foreign air? Doesn't it remind you of "I hung with grooms and porters on the bridge," and all that sort of thing, only it's a foreign bridge?'

Whereupon, the visitors guess 'Coventry,' and give it up in disgust when we say we meant Venice.

Benfield's picturesque resemblance to Venice was the chief point which induced Miss Patience Pembarth to settle among us. She had lost most of her tin. (Pray, do not for a moment imagine that I, Cicely Reade, am indulging in slangy jokes about money. Miss Pembarth's father had owned a tin mine; but one fine morning the tin moved on, or gave out, or did something unexpected, which altogether dissipated its customary remunerative properties.) When the mine failed to respond to the demands made upon it, old Mr Pembarth took to his bed and died. Miss Prudence saved a hundred a year from the wreck, or, rather, her Cornish friends settled that amount on her, and, by dint of the most unblushing statements, induced her to believe that it was the last act of repara-

tion which the fickle tin had made before moving on to some unexpected place where it could not be got at. Miss Pembarth was overwhelmed when this blow happened to her. She said that she could no longer remain in a district where so elusive a metal—she wasn't quite sure whether tin was a metal or a mineral—would always remind her of the fickleness of things. Besides, she was intensely proud. She humbly prayed to her Maker to forgive such a weakness; but the mere thought of giving up her family pew at Tregarthen church and seeing it occupied by others who could afford to pay for it, filled her with anguish. In all the ordered sweetness of her days—she was forty-five, but didn't look it—she had taken precedence at Tregarthen; now, she could not afford to live there any longer, and came to Benfield with her small maid.

I am not an imaginative person; but when I went to Miss Pembarth and began to pour out my love troubles in her sympathetic ear, it seemed to me as if the walls of her little sitting-room floated away, and that I was in heaven. She had such sweet blue eyes, such a lovely peach-like complexion, that I always wanted to kiss her, but feared to take so great a liberty. Whenever I felt I must yield to the impulse, I looked at her nose, which was aquiline and somewhat strongly defined, and refrained. One day, however, when my troubles were unusually bitter—I am not going to tell you about them—she suddenly opened her arms and held me tightly until I felt better. After that, I loved her more fondly than ever, and was not surprised when she consulted me about Mr Trelawny, who had come to settle in Benfield a fortnight before her arrival. He occupied a little house at the other end of the village, but never failed every afternoon to call at Miss Pembarth's and leave a punctilious message to the effect that he hoped the climate did not incommode her. Miss Pembarth invariably sent out a message in return thanking him for his courtesy, and saying that at present the climate had not inconvenienced her in the least.

On the first of every month, Miss Pembarth received callers. Mr Trelawny invariably stayed to tea afterwards, only to be ignominiously defeated at backgammon by Miss Pembarth. I conceived exaggerated ideas of Miss Pembarth's prowess at this redoubtable game, until papa informed me that Mr Trelawny could beat the village doctor with superlative ease, who was supposed to be the best backgammon player in the United Kingdom. Then it suddenly dawned upon me that here was a romance going on right under my nose—a romance which was developing slowly but surely.

I gathered from Miss Pembarth that Mr Trelawny must have lost all his tin also, as, next to the Pembarths, he had held the leading place in Tregarthen society. Indeed, he had been for years a constant visitor at the Pembarth mansion. It was easy to see that Miss Pembarth was a little troubled in her mind by Mr Trelawny's settling down at Benfield. She missed her great house, her servants and carriages, her customary benevolences, the deference which had always greeted her whenever she took her walks or drives abroad. Somehow,

Mr Trelawny's handsome face brought it all back to her. He was fair and florid, with an old-world courtesy which strongly resembled her own. And as for his age, he could not have been more than fifty. He never alluded to his own losses; but when people pointed out that the small house wherein he lived was not particularly commodious, he answered, with a certain amount of well-bred impatience, that he would not presume to live in a better dwelling than his accomplished neighbour, Mistress Pembarthly. If she could endure the miasmatic fog, laden with the odour of decaying cabbages, which came from the New River, he esteemed it a privilege to breathe it also.

As time went on, it was easy to see that Mr Trelawny's presence afforded Miss Pembarthly a great deal of comfort in every way. He had taken the most prominent and expensive pew in Benfield church—the pew generally reserved for the leading county family—in order to place it at her disposal. Miss Pembarthly was greatly distressed by this kindness, but did not know how to avail herself of it. 'You see, my dear,' she said to me, 'Mr Trelawny is so impetuous, but with the kindest heart in the world. If I appear in his pew with him, it might give rise to scandal. People will presume to talk about us, and look upon me as giddy. What would you advise me to do?'

I pointed out to Miss Pembarthly it would be a gracious thing for her to appear in Mr Trelawny's pew with me next Sunday, and that she could sit in mine on other occasions. But on the following Sunday, Mr Trelawny did not come to church at all, and Miss Pembarthly and myself were, consequently, the sole occupants of the pew. She was greatly distressed by this. 'I have no right, my dear,' she said, 'to come between this gentleman and the duty he owes his Maker. Will you kindly explain this to him, and'—she blushed faintly—'that the tender kindness of years would make his presence agreeable to me, were it not that we are in a strange town where people might presume to criticise our actions?'

I went upon my errand to Mr Trelawny, but he remained obdurate until it was arranged that they should occupy the pew alternately. When Miss Pembarthly sat there, Mr Trelawny entered my pew; and when he occupied his own pew, Miss Pembarthly came to me. Thus, propriety was not outraged, and no one could do more than dumbly wonder at such an arrangement. People were surprised that Mr Trelawny could afford to pay for so expensive a pew; but, with the most uncharitable motives, put it down to pride and a desire to oust the Bottelars—the Bottelars are our county family—we have only one—from their proud position. Besides, Miss Pembarthly had a far more imposing effect as she sat in the great pew, with the curtains drawn aside, than Mrs Bottelar, who always shut the curtains close, and refused to come out until the congregation had dispersed.

Matters continued thus for some months. I began to take far more interest in my own love affairs, and concluded that nothing fresh would ever happen to alter the relative positions of Miss Pembarthly and Mr Trelawny. And I

doubt very much whether anything would have given him the courage to speak out, had it not been that one Sunday, Miss Pembarthly forgot that it was his turn to occupy the big pew. Being a very punctual man, he had entered the church as the clock struck eleven, and modestly retreated behind the curtains in one corner, in accordance with his invariable custom. Miss Pembarthly came sailing up the aisle with her customary air of dignified humility. Human beings are but weak after all, even the best of them, and this was the one moment in her life which brought to mind her former greatness. As she opened the pew door, I noticed her give a little start, hesitate for a moment, and then irresolutely enter. She did not, as was her wont, draw back the curtains, and for the rest of the service I lost sight of her.

After the service was over and the congregation had dispersed, I went over to Miss Pembarthly's pew to ask if she were ill. When I looked in, she sat near the door. Mr Trelawny, looking the picture of conscious guilt, although it wasn't his fault at all, sat bolt upright in the opposite corner. And each waited for the other to move.

I solved the difficulty by affecting not to see Mr Trelawny, and drew Miss Pembarthly away. She usually dined with us on Sundays; but on this occasion walked past our house and went straight on towards her own little dwelling in a way that showed she was greatly agitated and scarcely knew what to do.

As I followed Miss Pembarthly up-stairs into her little bedroom, she faced me, the corners of her mouth curiously set and rigid. 'My dear,' she said, 'I must leave Benfield. I have disgraced myself. I shall never be able to survive the—the impropriety of entering a gentleman's pew by myself when he was there.'

A few tears ran down her cheeks. I had never seen Miss Pembarthly cry before.

'I was becoming quite happy here,' she said. 'People did not presume on my misfortunes, I have grown to love the little children, to make dear friends. Now I must go away from you all and live my solitary life elsewhere. Mr Trelawny will never forgive me. He did not even bow as I came away. He must think me an immodest woman.'

I tried to soothe her, but in vain. At that moment some one knocked at the door. Miss Pembarthly started in alarm. 'What can it be?' she asked, clinging to me, thoroughly unnerved.

The little maid came up-stairs. 'If you please, mistress,' she said, 'Mr Trelawny requests the pleasure of five minutes' conversation with you on a rather delicate matter.'

Miss Pembarthly clung to me. 'What shall I do, my dear? What shall I do?'

'Say that you will be happy to see him, dear Miss Pembarthly,' I suggested. 'It is better for you both that some understanding should be arrived at.'

Miss Pembarthly consented to see Mr Trelawny on the condition that I was present at the interview. I was a little frightened myself; but with my strong love for Miss Pembarthly, I could not desert her in such trying circumstances. So, after re-arranging the old-fashioned

point lace round Miss Pembarth's white throat, I took her hand and led her gently down-stairs to where Mr Trelawny awaited us, somewhat nervously, standing on the hearthrug, and almost filling the room with his majestic presence.

He looked a little disconcerted at seeing me; but Miss Pembarth's hand clung to mine so tightly that I dared not leave her. She was trembling also.

In response to Mr Trelawny's old-fashioned bow, Miss Pembarth made an equally old-fashioned 'courtesie,' bending back and recovering herself with a grace born of long and arduous studies in deportment. They had both of them the *grand air* which is now so quickly disappearing from among us.

'This young lady is kind enough to be present at our interview, Mr Trelawny,' said Miss Pembarth, 'and to witness my apology for my intrusion of this morning—an intrusion which Mr Trelawny scarcely needs my assurance to be aware was occasioned by my unpardonable forgetfulness.'

Mr Trelawny took her hand and bowed over it with courtly grace. Now that she had broached the subject, his nervousness disappeared. 'Madam,' he said, 'when you were good enough to enter the pew this morning, I was praying to my Maker that He would give me the courage to inform you of what was in my heart. Will you be good enough to listen to the two courses which present themselves to me, and deign to approve of one of them?'

Miss Pembarth bowed assent. Mr Trelawny placed chairs for us both, but himself remained standing.

'It had occurred to me, madam,' he said, 'that, owing to my unpardonable mistake of this morning—'

Miss Pembarth interrupted him. 'Nay, mine,' she said.

But Mr Trelawny was resolute that she should not take the blame upon herself, although there was no doubt about it. 'Owing to my unpardonable mistake of this morning,' he repeated, 'there are but two courses open to me in order to save you pain and distress. One is to go away from here, and never to return; the other'—he hesitated a moment; but I looked at him encouragingly, and, with another bow, he continued—'the other is, to lay my poor fortunes and unworthy self at your feet.'

Miss Pembarth's sweet eyes shone. She made another stately reverence, and gave him her hand, which he raised tenderly to his lips. 'I accept the latter proposal you are good enough to offer me,' she said. But human nature was too much for the somewhat frigid atmosphere in which she had been reared. 'Your patient goodness shames me. I am unworthy of so delicate a devotion.'

'Nay, madam,' he answered; 'it is you who have taught me how to live. Will you perfect the lesson by bestowing on me this hand?' and he again raised hers to his lips.

I left the room.

Presently, Miss Pembarth fluttered up-stairs to where I awaited her coming. She was greatly agitated. 'He is not poor at all, my dear,' she said. 'He simply gave up everything to be near me—took a mean little house—lived

humbly for my sake; and would have continued to do so all his days, had I not entered his pew this morning. He thought that to propose to me now would be to take advantage of my misfortunes, and nothing else would have made him do it except for the thought that I should be driven away from here by the accident of this morning.'

She sank on her knees by the side of her bed, and again I stole away.

The little house upon the bridge is empty now, for Tregarthen has its own again. I love to linger by the river and fancy that I see Miss Pembarth's shadow on the blind; but she has gone from out my daily life, and I am left upon the threshold of the great mystery of Love until my lover comes to claim me for his own. When my own poor heart is full of doubt and fear, I think upon these autumn lovers and grow strong. Shall I not be faithful also, and endure with patience to the end!

ARISTOCRATIC ENGINEERING HOBBIES.

THE Duke of Sutherland, at the recent opening of a new harbour in the north of Scotland, while recommending so strongly the extended adoption of light railways, spoke of matters with which he was practically conversant. His fondness for railway engine-driving is well known, and in this he only takes after the late Duke, who was thoroughly capable of taking charge of an express train. A private railway with locomotive engine, points, signals, and stations, runs through a goodly part of the ducal estates.

The German Emperor, whose hobbies take various directions, connected with engineering, marine locomotive, and military, possesses a splendid working model of a railway with engines, cars, points, signals, and stations. This he works ostensibly for the amusement of his children; in reality, for the pleasure and recreation it affords to himself.

About a year ago a complete railway a mile and a half in length was laid down by a London firm of small-engine builders in the grounds of the Marquis of Downshire, who acts as his own engine-driver and stoker. The train in connection with this private line, which was also supplied by the firm in question, consists of a locomotive—the exact model of a Northern Railway passenger express—weighing three tons, one carriage, and a guard's van. The engine cost a thousand guineas, can travel forty miles an hour, and consumes something like two hundredweight of coal per day. This railway precisely resembles a big railroad, only, of course, it is in miniature. There are the usual signal boxes and switches, these latter being strictly necessary, as his Lordship's railway runs across the carriage drive. Besides this, the Marquis of

Downshire has a model of a Great Eastern railway engine five feet in length, which is fitted with Joy's patent gear. It cost eight hundred guineas, and runs through the conservatories, a distance of about a quarter of a mile.

A model engine of the best class costs two thousand guineas, and the building of it occupies two years. But a miniature train big enough to carry passengers, and a railroad for it to run on, can be fitted up for one thousand pounds. The rails being portable, can, if necessary, be taken up in a day.

One of these tiny locomotive engines for practical use on a private estate has just been completed at the engineering works of Messrs W. G. Bagnall (Limited) of Stafford. The gauge of the rail is eighteen inches, the speed of the engine is twelve miles an hour, and it can draw a load of five tons. The cylinders of the engines are four inches in diameter, with a six and a half inches stroke, and a thirty inches driving-wheel. The engine is built on the model of a Great Northern passenger locomotive.

Private railways, it would seem, are rapidly becoming the fashion; and it is not altogether improbable that the day may soon come when amateur railway engine-driving will be as popular a pastime as yachting. The fastest miniature engines yet built run forty miles an hour, but makers of this class of toy say they could turn engines out to run a mile a minute!

The designing and working of small steam or oil launches is another of the German Emperor's favourite pastimes. Of these he possesses a large number. He has recently given an order to a famous Thames builder for a little electric launch, which, when finished, will be as prettily furnished and speedy a little craft as floats. In the palace at Berlin the whole floor-space of one great room is frequently the arena for the make-believe manœuvres of whole troops of toy soldiers, with mimic cannon, artillery, ammunition wagons, tents, fortresses, and all the pomp and panoply of modern warfare.

The late Czar of all the Russias was also enamoured of some of the hobbies which, though resembling the delights of the nursery, are yet accurate enough indications of the general bent of the adult mind. He had in his collection of playthings a large number of ship models, including several very elaborate and costly models of ironclads. Most of these were supplied by firms who built vessels for Russia. One of the latest items added to the collection was a splendid model of a mud-dredger of Dutch type, with all the dredging and propelling machinery counterfeited in marvellous detail, the model being the work of a well-known Glasgow firm of model-makers. Another recent addition was an exact reproduction of one of the most recently built Atlantic liners, produced, it is said, at a cost of eleven hundred pounds. Her engines were made to scale, and are working models; and every cabin on the upper deck was properly fitted and furnished as in the case of the actual vessel.

The Duke of Edinburgh (and Coburg), who is a man of many hobbies, is also keenly smitten

with the mania for miniature ships. His collection of these models, most of them in silver, consists of a fleet of over fifty in number.

One of the firms in London largely employed in building small engines and ships, interviewed on the subject recently, said that they had just built an exact model of the *Victoria* for General Knowles, who intends to put it on the water; and that they produced a large number of miniature ironclads, mostly after the models of ships now in commission. A son of Colonel North has already been supplied with six such warships in miniature. The hulls of these model steamers are built of steel; they mostly burn charcoal fires, and steam at a fair rate, some indeed attaining a speed of six knots an hour.

These are not by any means all the engineering hobbies which might be enumerated, but they may be sufficient to show that deep down in the hearts of the 'children of older growth,' and the most exalted in rank and dignity, there is a lurking fondness for indulging in hobbies which are the complement and the outgrowth of the delights of the nursery.

THE CHIMES OF ANTWERP.

HIGH o'er the sunlit market-place,
Where busy workers come and go,
From out the belfry's airy grace,
There ring in accents sweet and low,
Unfailing at the appointed times,
The 'tender and melodious chimes.'

Entranced we stand, and, listening, hear
The heavenly music in mid air;
When lo! there falls upon the ear
A note of terror and despair:
A tone of grief and anguish dwells
Within the sweetness of the bells.

For once, beneath the belfry's shade,
The demons of this earth held sway,
And fire, and sword, and rapine made
A fury of a night and day;
And while the chimes of Antwerp last,
There echoes yet that dreadful past.

For still, whene'er the sweet bells ring
Their message to the town below,
Their tuneful voices seem to bring
Some memory of that day of woe:
The 'old, unhappy, far-off' tale
Arises like a breath of bale.

C. G.

* * TO CONTRIBUTORS.

- 1st. All communications should be addressed to the 'Editor, 339 High Street, Edinburgh.'
- 2d. For its return in case of ineligibility, postage-stamps should accompany every manuscript.
- 3d. To secure their safe return if ineligible, ALL MANUSCRIPTS, whether accompanied by a letter of advice or otherwise, should have the writer's Name and Address written upon them IN FULL.
- 4th. Poetical contributions should invariably be accompanied by a stamped and directed envelope.

Printed and Published by W. & R. CHAMBERS, Limited,
47 Paternoster Row, LONDON; and EDINBURGH.